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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,966	06/02/2000	Kiyofumi Tsuruta	1614.1057	5257
21171	7590	02/21/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			BLACKWELL, JAMES H	
			ART UNIT	PAPER NUMBER
			2176	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/584,966		TSURUTA, KIYOFUMI	
	<b>Examiner</b>		<b>Art Unit</b>	
	James H. Blackwell		2176	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/01/2005 has been entered.
2. Claims 1-2, 4-5, and 9-14 remain pending.
3. Claims 1, 4, and 9 are independent claims.
4. The original priority date is **06/03/1999**.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 9, 11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zdybel, Jr. et al. (hereinafter Zdybel, U.S. Patent No. 5,486,686) in view of BarCode1 (R. Adams, "BarCode1 web site, 2-D BarCode page, downloaded from

<"http://web.archive.org/web/19990128002119/http://www.adams1.com/pub/russadam/stack.html"> dated 01/28/1999), and in further view of Mason (U.S. Patent No. 5,214,755 filed 10/18/1991 issued 05/25/1993).

6. **Regarding independent Claim 1 (and similarly independent Claims 4, and 9), Zdybel teaches a method of producing printed matter containing a direct reading material and an additional material related to the direct-reading material by an information processing apparatus by producing unfiltered or filtered (i.e., complete or partial, uncompressed or compressed) machine readable digital representations of electronic documents and human readable renderings of them on the same recording media using the same printing process using a printer (Col. 4, lines 45-51; Figs. 3-4).**

Zdybel does not explicitly teach that *the direct-reading material comprising text and pictures, and the additional material comprising text, sound, and images related to the direct-reading material*. However, BarCode1 teaches Datastrip Code, which was originally called Softstrip and was developed by Softstrip Systems. It is the oldest of the two dimensional symbologies. Datastrip Inc now owns this proprietary code. It is a patented encoding and scanning system that allows, data, graphics and even digitized sound to be printed on plain paper in a highly condensed format and read error-free into a computer. Datastrip's main components are printed graphic patterns (the Datastrip) and electro-optical readers. A Datastrip Code consists of a matrix pattern, comprising very small, rectangular black and white areas (or DiBits). Markers down the side and across the top of the strip (start line, checkerboard and rack) contain alignment information for the Datastrip Code readers and ensure data integrity. Header information contains details about the data stored on the strip: file name, number of bytes, density of the data strip, etc. The Datastrip encoding method, which includes parity bits on each encoded line, offers excellent reliability and error correction capabilities. Data strips are typically up to 5/8 inch wide and up to 9 inches long. Data density can vary from 150 to 1,000 bytes per square inch, depending upon the printing technology used to produce the strips. Datastrip Code can be successfully produced by most types of dot matrix, laser (including very high speed centralized laser printers), ink jet or thermal printers. Datastrip Code can be reproduced on most types of paper (including newsprint) and plastic, using conventional printing processes, ranging from office photocopiers (for lower density strips) to high speed web presses. Low-density

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strips (up to 1,100 bytes per 9-inch strip) may be produced on most dot matrix printers.

Strips containing up to 3,500 bytes can be produced using laser printing technologies.

Very high-density strips (up to 4,800 bytes) require more sophisticated production methods using photographic techniques. Special readers must read Datastrip Code from Datastrip, Inc. and the reader must be in contact with the code. *Originally this code was promoted as a way to publish software in books and magazines in a machine-readable form* (emphasis added). The code is now of most interest for printing information on ID cards (p. 7 of 10, paragraphs 1-4). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Zdybel and BarCode1 because both inventions relate to bar codes that encode additional material related to the printed data. Adding BarCode1 provides the benefit of adding the ability to encode text, graphics and audio to accompany printed text in documents such as computer magazines.

Zdybel continues to teach *converting primary data of the additional material into secondary data in the form of codes for high-density display* in that for integrating a digital, machine readable representation (101) of the electronic document (32) with the human readable rendering of it, the bit-level digital data content of the ASCII, DDL or PDL encodings of all or selected portions of the electronic document (32) is encoded at (105) to convert it into "glyph encodings" (encodings representing distinctive markings having at least two distinguishable, machine readable states--viz., a true ("1") state and a false ("0") state). These glyph encodings are then merged into the electronic document description file for the electronic document (32) to cause the glyphs to be

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printed on the hardcopy output document (102) at one or more selected locations (Col. 8, lines 39-50).

Zdybel fails to explicitly teach *storing data to be applied to an allocating operation*. However, Mason teaches a system that breaks a page into a number of layout rectangles that specify the position, width and height of a page available to a user. It also teaches that a user can place specific paragraphs or groups of paragraphs (tables or graphics also) can be placed at specific locations on a page (Col. 3, lines 34-43). Though not explicitly stated by Mason, it would have been obvious to one of ordinary skill in the art at the time of invention that information associated with both the layout rectangles and the specifically positioned objects of text, tables, and graphics would have been stored in some fashion within the computer system in Fig. 9, allowing the page layout procedure to recall these values as it processes the page.

Mason also teaches determining a specific way of allocating the additional material with respect to relevant direct-reading material based on the stored data in that using the layout rectangle positional information as well as that data stored with the specifically positioned objects mentioned previously, the layout procedure starts and processes the page layout determining the next page layout allocation based on information provided by the previous layout object and its positioning and length information. It determined where to put the next layout object based on data associated and stored with prior objects as well as prior specifically positioned objects (Col. 4, lines 20-63). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Zdybel and Mason as both inventions relate to the layout and placement of the component objects that comprise a document page or pages. Adding the teaching of Mason provides the benefit of associating layout information with the individual objects and using that information to determine future actions as to the placement of remaining component objects.

Zdybel continues by teaching *performing the allocating operation for the direct-reading material and the additional material in accordance with a type space corresponding to the secondary data* in that the glyphs may be printed at various locations on the hardcopy document (102). For instance, one or more fields may be set aside in the top, bottom, right-hand, or left-hand margins of the document (102) for the printing of such glyphs. Alternatively, as shown in Figs. 3 and 4, the glyphs may be printed in machine identifiable glyph frames which are fully or partially confined within



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the margins of the human readable field of the document (102) or fully outside those margins (Col. 9, lines 13-21).

Zdybel also teaches that *the primary data of the additional material converted into the secondary data in the form of codes for high-density display comprise data from which information content is obtained directly without accessing a separate storage* location in that, for example, the glyph encoded data that is embedded in the hardcopy document (102) may include one or more of the following: machine readable descriptions of the data points for structured graphics as at (131), machine readable descriptions of the algorithms utilized for performing computations for spreadsheets and the like as at (132), machine readable descriptions of hypertext pointer values as at (133), machine readable descriptions of some or all of the structural characteristics of the electronic source document as at (134), machine readable descriptions of the document editor used to prepare the source document (32), as at (135), machine readable descriptions of the file name and storage location of the electronic source document (32), as at (136), and machine readable descriptions of audit-trail data for the electronic source document (32), as at (137) (Col. 10, lines 13-27).

Zdybel also teaches *the specific way of allocating the additional material with respect to the relevant direct-reading material is selected from among the following ways of allocating the additional material: allocating at an immediate position of the relevant direct-reading material, allocating at a special place, allocating at a directly designated vacant position, or allocating at a directly designated overlapping position* in that, as stated above, the glyphs may be printed at various locations on the hardcopy

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document (102). For instance, one or more fields may be set aside in the top, bottom, right-hand, or left-hand margins of the document (102) for the printing of such glyphs (*allocating at a directly designated vacant position*). Alternatively, as shown in Figs. 3 and 4, the glyphs may be printed in machine identifiable glyph frames which are fully or partially confined within the margins of the human readable field of the document (102) or fully outside those margins (Col. 9, lines 13-21).

**In regard to dependent Claim 2 (and similarly dependent Claim 5), Zdybel** teaches *said performing an allocating operation comprises linking the direct-reading material designated by a user and the related additional material* in that if all of the digital data contained by the electronic document (32) is printed in digital data form on the hardcopy (102), the electronic document (32) can be recovered merely by employing the input scanner (12) for scanning the glyph encoded data to recover the data that affects the appearance of the document, as at (121), as well as the data that is not inferable from the appearance of the document, as at (122) (Col. 9, lines 46-53).

**In regard to dependent Claim 11 (and similarly dependent Claims 13-14), Zdybel** fails to specifically teach that *the secondary data in the form of codes for high-density display comprises two-dimensional barcode*. However, BarCode1 teaches Datastrip Code, which was originally called Softstrip and was developed by Softstrip Systems. It is the oldest of the two dimensional symbologies (p. 7 of 11, 1<sup>st</sup> paragraph). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Zdybel and BarCode1 as both inventions relate to bar codes

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that encode additional material related to the printed data. Adding BarCode1 provides the benefit of a 2-dimensional barcode scheme to encode the additional material.

7. Claims 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zdybel in view of BarCode1, and in further view of Mason, and in further view of Ikeda (U.S. Patent No. 5,938,727 filed 01/31/1997, issued 08/17/1999).

8. **In regard to dependent Claim 10 (and similarly dependent Claim 12),** neither Zdybel nor BarCode1 teach *said linking the direct-reading material and the related additional material uses an address of a separate storage location in which said related additional material is stored*. However, Ikeda teaches a barcode representing a URL as well as the URL itself are printed side by side on a printed medium such as a magazine advertisement or newspaper insert. When a user who has found an interesting object in the printed medium has the affixed barcode scanned by a scanner, software incorporated into the user's personal computer operates to convert the barcode to a URL so as to have a WWW client software, such as Mosaic and Netscape Navigator, recognize it, whereby a specified homepage is instantaneously accessed and displayed on the screen and the desired information is obtained. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Zdybel, BarCode1, and Ikeda as all three inventions provide a mechanism to relate printed material and additional material related to the printed material. Adding the teaching of Ikeda provides a link mechanism to the additional material that a user can scan to take them to the additional material.

***Response to Arguments***

9. Applicant's arguments, see amendment, filed 12/01/2005, with respect to the rejection(s) of claim(s) 1, 4, and 9 under Zdybel in view of Barcode1 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Mason in combination with Zdybel and Barcode1. Mason teaches using stored layout information associated with document objects to determine the location of other document objects.

**Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell  
02/06/2006

*William L. Bashore*  
**WILLIAM BASHORE**  
**PRIMARY EXAMINER**  
2/16/2006